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United States Patent [19][11] **Patent Number:** **5,267,154****Takeuchi et al.**[45] **Date of Patent:** **Nov. 30, 1993****[54] BIOLOGICAL IMAGE FORMATION AIDING SYSTEM AND BIOLOGICAL IMAGE FORMING METHOD**

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[52] U.S. Cl. **364/419.2; 395/119; 395/152; 345/122**

[58] Field of Search **364/419; 395/152, 119, 395/120, 135; 434/185, 264, 262, 270, 85, 99, 274; 340/725, 734, 747**

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[57] ABSTRACT

A biological image formation aiding system and a biological image forming method are provided in which three-dimensional data corresponding to a standard shape of a biological article, standard motion thereof, and a standard material feeling of an outer surface of the biological article are prepared, and a realistic three-dimensional synthesized image of an entire biological article with individuality can be formed simply. The system includes a shape data storage for storing data corresponding to a three-dimensional shape of a biological image; a motion data storage for storing data corresponding to three-dimensional motion of the biological image, a material feeling data storage for storing data corresponding to a three-dimensional material feeling of an outer surface of the biological image; editing/processing units capable of modifying at least one of the data corresponding to the three-dimensional shape of the biological image, the three-dimensional data corresponding to the motion of the biological image, and the data corresponding to the three-dimensional material feeling of the outer surface of the biological image in accordance with a producer's intent; and an output unit responsive to the outputs of the editing/processing unit for synthesizing the data corresponding to the three-dimensional biological image, the data corresponding to the three-dimensional motion of the biological image, and the data corresponding to the three-dimensional material feeling of the outer surface of the biological image after modification with each other to provide synthesized three-dimensional data for a biological image to be produced.

16 Claims, 16 Drawing Sheets